

TAME indicators in Kadorih

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This paper describes tense, aspect, modality, and evidentiality indicators (TAME indicators) in Kadorih which is spoken in the upriver region of Central Kalimantan, Indonesia. In Kadorih, there are no dedicated TAME affixes. TAME meanings are wholly or partly indicated by various content and function words. Tense can be indicated mainly by temporal nouns and adverbs. Aspectual meanings are coded by a large variety of items, which includes auxiliaries, adverbs, verbs, or others. Modality is indicated mainly by auxiliaries, verbs and nouns. Evidential meanings are indicated by particle and (verbal) nouns.

1. Introduction¹

The aim of this paper is to describe tense, aspect, modality, and evidentiality indicators (TAME indicators) in Kadorih, an Austronesian language belonging to the West Barito subgroup of Malayo-Polynesian languages. TAME indicators in Barito languages in Kalimantan have hardly been discussed to date. This paper attempts to look into meanings and usages of TAME indicators in Kadorih. The approach used in this paper is descriptive and text-based rather than formalistic. The data presented here are based on my own fieldwork conducted in Indonesia.

In the grammar of Kadorih, there is no dedicated TAME affix, no grammaticalized TAME category. TAME meanings are wholly or partly denoted by content and function words, or by larger linguistic units except for undergoer voice infix: adverbs, auxiliaries, nouns, verbs, prepositions, existentials, particles, numerals, and verbal repetition (not reduplication).

The present section gives a brief introduction of the language, and section 2 describes three temporal functions, section 3 six aspectual functions, section 4 five modal functions, and section 5 evidentiality. Section 6 summarizes the main findings of this paper.

Kadorih is also known as ‘Ot Danum’ or ‘Dohoi’ (Hudson 1967) or ‘Malahoi’ (*Ethnologue* 2009, language code: **otd**). The number of its speakers is estimated to be 78,800 (2007 SIL). Kadorih occupies a less important position in terms of language use than other languages of the region. The prestige languages in the region are Ngaju and Indonesian, which are used as ‘appropriate’ languages in schools and religious assemblies. Moreover, all Kadorih people speak Ngaju, and about half of them can speak Indonesian. This means that its speakers may perceive Kadorih to be of minor significance for their culture or society.

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Kadorih has eighteen consonants /*p b t d c[ɬ] j[ɕ] k g m n ny[ɲ] ng[ŋ] w[β] s[ɕ] h r l[r~l] y[i̯]*/ and five vowels /*i e a o u*/ (the phonemes are represented in italics, with bracketed IPA symbols where needed).

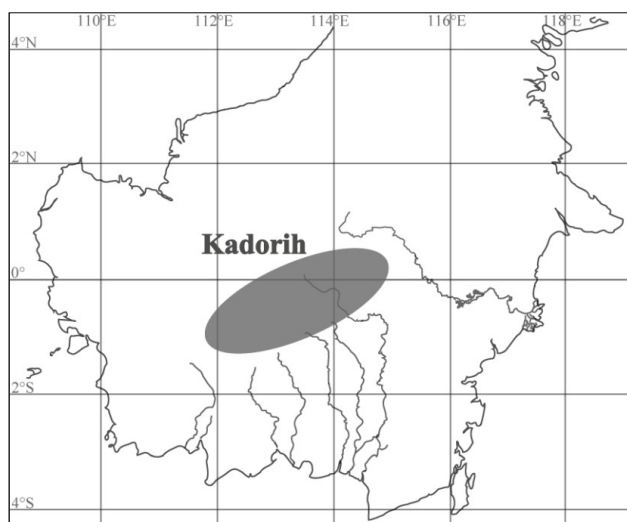


Figure. 1 The geographical distribution of Kadorih speakers

2. Tense indicators

In Kadorih, tense can be indicated by various time adjuncts as in ‘standard formal Indonesian’ (Sneddon 1996). Example (1) is of standard formal Indonesian.

- (1) a. **Standard formal Indonesian** (Sneddon 1996: 197, emphasis added)
Tadi pagi dia pergi ke kantor.
 a.short.while.ago morning 3sg go to office
 ‘This morning he **went** to the office.’
- b. *Dia pergi ke kantor.*
 ‘He **went/goes/will go** to the office.’

The verb *pergi* ‘go’ in (1a) refers to a past event ‘went’ and cannot refer to a non-past one. This interpretation on the verb arises from the adjunct *tadi pagi* ‘this morning’ in the same clause, which indicates past tense. On the other hand, both past and non-past interpretations are available when tense is not indicated at all as in (1b).

Similarly, temporal specification in Kadorih clauses is based on tense indicators such as the adjunct ‘this morning’. For example, the verb *ngisok* in (2a) refers to a past event of asking, not to a non-past one since there is a tense indicator *nanai* ‘a moment ago’ in the same clause, while the clause without any tense indicator in (2b) may be interpreted as either past or non-past.

- (2) a. *nanai ahku ngisok io.*
 a.moment.ago 1sg ask him
 ‘A moment ago, I **asked** him.’
- b. *ahku ngisok io.*
 ‘I **asked/ask/will ask** him.’

Like many western Austronesian languages (cf. Himmelmann 2005: 159), Kadorih has a number of auxiliaries for marking aspect or modality, but does not have any auxiliaries for tense. Basically, temporal specification of clauses such as in (2a) is unnecessary in a discourse. However, as will be seen in the following subsections, Kadorih has many kinds of optional elements for indicating tense, and this fact poses a question of how they contrast with one another within the system of temporal interpretation.

In this section, I will describe six temporal functions: three kinds of past tense (general, remote, near), two kinds of future tense (general, near), and present tense. They can be indicated mainly by temporal nouns and adverbs.

2.1 Past

In this subsection, three kinds of past tense are described. **Error! Reference source not found.** summarizes the forms of past tense indicators and their sub-functions, parts-of-speech distinction, and availability of adnominal modification.

	<i>lomo</i>	<i>hatuh</i>	<i>aang ihco</i> + temporal noun	<i>malom</i>	<i>(na)nai</i>
sub-function	remote past	general past		near (or distant) past	
part of speech	noun	adverb	(adverbial phrase)	noun	adverb
adnominal	yes	no	no	yes	yes

Table 1. Past indicators in Kadorih

2.1.1 Remote past

The temporal noun *lomo* ‘era (=former)’ ensures that the situation time (=the time of the predicated situation) is completely remote past. It usually means ‘several decades ago’. Based on its syntactic distribution, *lomo* is classified as a noun.² All temporal or locational nouns may function as adverbial or adnominal modifiers; *lomo* can also occur either in adverbial or adnominal position as in (3).

- (3) a. *lomo* *yaro* *usaha* *aang* *booi*, *aang* *juoi*
 former not.exist effort at/in/on downriver at/in/on upriver

aro *usaha*.
 much effort

‘**Formerly** there was no effort (to trade) in the downstream area, (but) in the upstream area, there was much effort.’

- b. *kadorih=lah* *kolou* *kesah* *Miskin* *jaman* *lomo*.
 like.that=EMPH state story (name) period **former**
 ‘The story of Miskin in the **old** days is just like that.’

In (3a), *lomo* is used as an adverbial modifier, which indicates remote past for the situations denoted by the predicates *yaro usaha* ‘there was no effort’ and *aro usaha* ‘there was much effort’. (3a) means that the situation times of ‘there_be_(no-)effort’ precede the reference time *r* (here, the time of the utterance) by several decades. On the other hand, in (3b), *lomo* occurs in adnominal position, modifying the preceding noun *jaman*

² It can be the head of an NP, and can be followed by demonstrative clitics *tuh* and *rih*.

‘period’. It indicates remote past for the concept (not the situation) denoted by the temporal noun *jaman*, and the phrase *jaman lomo*i means that the time of the ‘period’ precedes *r* by several decades.

In both examples of (3), the temporal specification is remote past tense. Future, present, or even near past cannot be possible interpretations because of the existence of *lomo*i in the same clause. The situation time of a predicate or the time of a noun must be remote past if the relevant predicate/noun is modified by *lomo*i.

2.1.2 General past

‘General past’ in the description of Kadorih is the non-remote or non-near (or non-distant) past tense. Roughly speaking, the temporal distance from the reference point of time is unspecified.

Example (4) shows clauses with a general past indicator *hatuh* ‘in the past’. It is an adverb and cannot be used adnominally, but it may appear after preposition, as (4a) shows.

- (4) a. *tahkan hatuh* [from **in.the.past**] ‘in the past ... years (during one’s lifetime)’
 b. *ahku hatuh tohko nuhpi.*
 1sg **in.the.past** exist dream
 ‘I had a dream.’
 c. *beteng koro Kasuya nokuh Tumbang Korik hatuh,*
 when we.two (name) toward (place.name) **in.the.past**
 ‘When I went to T. Korik with Kazuya, (my engine broke down.)’

In (4b), *hatuh* occurs between the subject argument *ahku* and the predicate *tohko nuhpi* as is typical for auxiliaries or adverbs. In (4c), *hatuh* occurs in the clause final position where auxiliaries may not appear. Although *hatuh* can distribute in a variety of ways, it usually modifies the predicate in the same clause. (4b) and (4c) mean that the situation times of ‘there_be_dream’ and ‘go_to_T.Korik_with_Kazuya’ precedes the reference time *r* (here, the time of the utterance) which is given by the context.

On the other hand, some temporal nouns implicate general past tense when combined with *aang ihco* [at/in/on one] ‘on a certain ...’.

- (5) a. *aang ihco kotihka, io tulak ngandup.*
 at/in/on one time 3sg depart hunt
 ‘On one occasion, he departed to hunt.’
 b. *aang ihco ondou, ahku nohto mahtan ondou bolop.*
 at/in/on one day 1sg see sun extinguished
 ‘One day, I saw the sunset.’

However, if the phrase [*aang ihco* + temporal noun] is combined with a future tense adverb *nain/noin* ‘later’ as in (6), the tense of the event is specified as future (cf. *aang ihco ondou* in (5b)).

- (6) *kanahuang=ku aang ihco ondou nain.*
 wish=1sg.POSS **at/in/on one day** later
 ‘My hope would be that (I would do that) someday.’

In (4) and (5), the temporal specification cannot be non-past, rather it must be general past tense. The situation time of a predicate must be general past (=temporal distance unspecified) if the relevant predicate is modified by *hatuh* or *aang ihco* + temporal noun (without *nain/noin*).

2.1.3 Near past

A near past indicator *malom* ‘yesterday, not long ago’ may be placed in immediately pre- or post-verbal position. For example, (7) shows that *malom* modifies the following or preceding verb *pihkir* ‘think’.

- (7) a. *ahku malom pihkir huang nguan ara-i bohkon.*
 1sg **not.long.ago** **think** inside make name-3sg.POSS different
 ‘I **thought** about giving him a different name.’
- b. *ahku pihkir malom umba kawal=ku.*
 1sg **think not.long.ago** with friend=1sg.POSS
 ‘I **thought** (over it) together with my friend.’

In (7), *malom* carries the meaning of near past relevant to the situations mainly denoted by *pihkir*. On the other hand, *malom* in (8) occurs in adnominal position and modifies the preceding possessive pronoun *eku* ‘mine’.

- (8) “*mukin eku malom turih*” *hion huang=ah.*
 possibly mine **not.long.ago** that QUOT inside=3sg.POSS
 ‘“That might be what I gave (yesterday)” said in his heart.’

In (8), *malom* carries the meaning of near past relevant only to the nominal *eku* ‘mine’. It means that the event of ‘giving’ which is packaged as *eku* ‘mine’ was performed not long ago (in this example, it was the day before the utterance).

Basically, *malom* specifies near past tense as described above, but there are cases of distant past, as (9) shows.

- (9) a. *io jadi lahir aang bulan holu malom.*
 3sg PFCT born at/in/on month firstly/past **not.long.ago**
 ‘He was born a few months **ago**.’
- b. *jadi, orih naing kesah=ku,*
 then that word story=1sg.POSS
panyala-k=ku ngitot injah=ku nokuh
 journey-1sg.POSS=1sg.POSS deliver mate=1sg.POSS toward
Tumbang Mili malom.
 (place.name) **not.long.ago**
 ‘So, that’s my story, (a story of) my journey when I took my mate to T. Miri **before**.’

Another near past marker is the adverb (*na*)*nai* ‘a moment ago, earlier’ introduced in (2) above. It specifies that an event occurred today (hodiernal). The word *nanai* often occurs in a clitic form *nai* resulting from the deletion of its first syllable.

- (10) *jadi, nanai, jam jahawen=nai, ihkai jadi kuman*
 then a.moment.ago hour six=**a.moment.ago** 1sg.EXCL PFCT eat
konah sihhah kahat jatuh.
 dishes edible.soft.shoot betel that(not.the.other)
 ‘A little while **ago**, at six o’clock (**today**), we ate dishes of the edible soft shoot of that (not the other) betel tree stem.’

Example (11) shows the adverbial occurrence of *nanai*, while (12) shows the adnominal one.

(11) Adverbial *nanai*: near past (situation)

- a. *nanai ahku ngesah koturunan Tupang.*
a.moment.ago 1sg tell.story descendant (name)
 ‘A little while ago, I told about the descendants of Tupang.’
- b. *ahku nanai murik, murik bongo-k=ih,*
 1sg **a.moment.ago** go.upstream go.upstream by.oneself-1sg.POSS=just
 ‘I paddled upstream a little while ago, went just by myself, (left at 11:30).’

The adverb *nanai* specifies near past tense relevant to the situations denoted by the predicates in (11). Therefore, the events ‘tell_about_the_descendants_of_Tupang’ and ‘go_upstream_by_myself’ precede the reference time *r* in both cases. On the other hand, the adnominal *nanai* specifies near past tense relevant to the nominals, ‘yours’ in (12).

(12) Adnominal *nanai*: near past (non-situation)

- inon kolou emu nanai=rih?*
 how yours **a.moment.ago**=that
 ‘How did you get your (fruit of rambutan)? (lit. How was yours?)’

2.2 Future

In this subsection, two kinds of future tense are described. Table 2 summarizes the forms of the future tense markers and their sub-functions, parts-of-speech distinction, and availability of adnominal modification.

	<i>hawun</i>	<i>nain/noin</i>	<i>(ah)kan</i>	<i>pongo</i>	<i>balang</i>
sub-function	near (or distant) future		general future		
part of speech	noun	adverb	preposition	noun	adverb
adnominal	few	few	no	few	no

Table 2. Future tense indicators in Kadorih

2.2.1 Near future

Near future tense in a clause can be specified by the temporal noun *hawun* ‘tomorrow’, as (13) shows.

- (13) *hawun. hawun=ku ngua-i.*
tomorrow tomorrow=1sg make-3
 ‘Tomorrow. Tomorrow, I will do it.’

In (13), *hawun* is used as an adverbial modifier. (13) means that the situation time of ‘I_do_it’ follows the reference time *r* by one day. This near future marker may modify another temporal noun, for example, *panyalak=ku ondou hawun* [journey=1sg.POSS day **tomorrow**] ‘my tomorrow’s journey’.

The following example (14) shows that there is a case of non-tomorrow future indicated by *hawun*. The (sub)event of ‘bring_it_to_your_place’ in (14) can follow reference time *r* by several days.

- (14) *kenang-kenangan ijo ahkan omin nokuh unuk emu hawun.*
 reminiscences REL for bringing toward place yours **tomorrow**
 ‘(This is a) reminiscence for you to bring your home **later**.’

Another near future marker is the adverb *nain/noin* ‘later’. It can specify the tense of a predicate as near future as in (15a), and may modify a temporal noun as in (15b) (and (6) above).

- (15) a. *noin=ku nguan eku aro bara emu=tuh, eku=rih.*
later=1sg make mine much from yours=this, mine=this
 ‘**Later**, I will increase mine more than yours (gathered fruits), mine.’
 b. *ahku=tuh mahtoi, naing=ah, ondou kuju noin.*
 1sg=this die word=3sg.POSS day seventh **later**
 ‘I would die, he said, seven days **later**.’

In (13)–(15), the temporal specifications must be near or distant future tense because of the existence of *hawun* or *nain/noin*. The situation time of a predicate or the time of a noun must be near or distant future if the relevant predicate/noun is modified by *hawun* ‘tomorrow’ or *nain/noin* ‘later’.

2.2.2 General future

‘General future’ in Kadorih is the non-remote or non-near future tense. There are three general future markers in Kadorih, *(ah)kan* ‘for’, *pongo* ‘late, later, last’ and *balang* ‘not to happen’.

Basically, *ahkan* is used as a preposition to introduce a goal argument.³ In addition, *ahkan* can introduce a purposive clause, as (16) shows.

- (16) a. *ahkan=kai narik=ah, ahku nyawot dohop umba*
for=1pl.EXCL pull=3 1sg ask.for help with
oka=ku
 older.brother=1sg.POSS
 ‘**In order that** we could pull it (=tree) down, I asked my older brother for help.’
 b. *ahka-m ngoruh ihkai jahawen=tuh.*
for-you take.a.wife 1pl.EXCL six=this
 ‘**In order for** you to take us for your six wives.’

On the other hand, (17) shows *ahkan* used for a general future indicator when it occurs between a subject argument and a predicate. It cannot appear in adnominal (post-nominal) position probably because it is basically a preposition.

- (17) a. *eam io ahkan natarang=ah.*
 NEG it FUT collide.with=3
 ‘It (=boat) **will** not collide with them (rocks).’
 b. *nah, ahku (ah)kan bakesah, iyo orih jodol “Miskin”.*
 well 1sg FUT tell.a.story then that title (name)
 ‘Well, I **am going to** tell a story, it is “Miskin”.’

³ For example, *ahkan Mulau* ‘(brought back home many birds) for Mulau’, *ahkan Putu Sibau* ‘(moved) to Putu Sibau (= place name)’.

(17) means that the situation times of ‘it collide with them’ and ‘I tell a story’ follow the reference time *r*. The temporal distance between the situation time and *r* may be specified as one day by the near future indicator *hawun* as in (18).

- (18) “*hawun*” *hio-i*, “*Cahaci ahkan ngunyang=ah*”.
 tomorrow QUOT-3sg.POSS (name) FUT check.fish.trap=3
 ‘“Tomorrow” she said, “(Ra)cahaci will check the fish trap.”’

Another general future indicator is the adjective *pongo* ‘late, later, last’. However, the functional load of this indicator is very low, therefore it does not occur frequently. (19) shows that *pongo* modifies the temporal noun *ondou* ‘day’.

- (19) *ahku tou hosombang umba io ondou pongo*.
 1sg can meet with him day late
 ‘I can meet him in the future.’

There is another marker which is semantically complex, *balang* ‘not to happen (for some reason)’. Morphologically, *balang* cannot be analyzed as a polymorphemic word. Example (20) shows *balang* modifying the predicate *mahtoi* ‘die’.⁴ It cannot appear in a post-nominal position.

- (20) *tuh, kurun maruan=kai, balang=ku mahtoi=rih*.
 this thank.God soul=1pl.EXCL not.happen=1sg die=that
 ‘Now, giving thanks to our soul, I would not disappear.’

The temporal specifications of *ahkan*, *pongo* and *balang* cannot be past or present. The situation time of a predicate must be general future if the relevant predicate/noun is modified by *ahkan*, *pongo* or *balang*.

2.3 Present

Cross-linguistically, the distinction of temporal distance may be tied to past and/or future tense as seen in preceding subsections (e.g. remote past vs. near past). It is usually not tied to present tense because, essentially, “the situation referred to [...] by the present tense is simply a situation holding literally at the present moment” (Comrie 1985: 38).⁵

In Kadorih, present tense can be indicated by an extended word constituted by a temporal noun and a proximal demonstrative clitic *tuh*. In the following example, the temporal nouns *beteng* ‘midst’ and *wayah* ‘period’ are introduced.

Example (21a) shows the adverbial occurrence of *beteng=tuh* ‘now’ and (21b) shows adnominal use.

- (21) a. *ahku ngandah=ka nohto anak=ku beteng=tuh sehat*.
 1sg happy=also see child=1sg.POSS midst=this healthy
 ‘I am also happy to see my children are now healthy.’

⁴ The semantic representation of (20) can be roughly sketched as [will_not [I_die]] in which the event [I_die] is embedded under the future-negative indicator. In other contexts, the interpretation may be [will [I_not_die]] or [not [I_will_die]].

⁵ ‘Whether or not this situation is part of a larger situation extending into the past or the future is an implicature, rather than part of the meaning of the present tense, an implicature that is worked out on the basis of other features of the structure of the sentence and one’s knowledge of the real world’ (Comrie 1985: 38).

- b. *jakai ndoi=io ngomin Kompas beteng=tuh kolou Kasuya.*
 if if=3sg bring compass **midst=this** like (name)
 ‘If he brought a **modern** compass like Kazuya.’

The sentence in (21a) is analyzed as a nesting structure involving double embedding of the predicates [I_be_happy [I_see [child_be_healthy]]]. *Beteng=tuh* specifies present tense on its following predicate *sehat* ‘(be) healthy’ in order to contrast with a hypothetical situation ‘child_be_not_healthy’ in the past or future.

In (21a), *beteng=tuh* carries the meaning of present tense relevant to the situation denoted by the predicate *sehat* ‘(be) healthy’. On the other hand, *beteng=tuh* in (21b) carries the meaning of present tense relevant only to the noun *Kompas* ‘compass’, giving the meaning ‘modern’.

Another present tense indicator is *wayah=tuh*. The word *wayah* is a borrowed word from Ngaju Dayak (*wajah* ‘period, season’, Hardeland 1858: 638).

- (22) *Muang=tuh, wayah=tuh ijo anai=ka keturuna-i.*
 (name)=this **period=this** REL be=also descendant-3sg.POSS
 ‘*Muang*, (the person) whose descendants are living **today**.’

In (22), *wayah=tuh* indicates that the reference time *r* (here, the time of utterance) is included in the lifetime of *Muang*’s descendants. It does not indicate that *r* is included in the lifetime of *Muang*. This present tense indicator does not modify the preceding noun but specifies present tense relevant to the situation. A non-situation example of *wayah=tuh* has not been attested.

There are other extended words constituted by a temporal noun and *tuh*: *ondou=tuh* ‘today’, *ngohkos=tuh* ‘this morning’, *sohit=tuh* ‘this evening’, and *ngolomi=tuh* ‘this night’. However, these phrases do not specify present tense on a predicate (or a noun), as (23) shows.

- (23) “*nanjung ondou=tuh*” *hio-i*, “*masap nokuh Tuhkang Uhkir*”.
 walk **day=this** QUOT-3sg.POSS visit toward (name)
 ‘“**Today**, I will walk” he said, “(and) visit Tuhkang Uhkir”.’

In (23), the time of the action denoted by *nanjung* and *masap* follows (or, in other contexts, possibly precedes) the time of utterance which was made by ‘I’. In other words, the tense of the predicate is not present, but near future (or possibly near past). Similarly, *ngohkos*, *sohit* and *ngolomi* do not indicate present tense even when attached to by *=tuh*.⁶

3. Aspect indicators

In Kadorih, quantitative or imperfective meanings of predicates are often optionally interpreted without specific indicators, but other aspectual meanings (ingressive, egressive, perfect, or perfective) cannot be interpreted without aspect indicators. Aspectual meanings are coded by a large variety of items, which includes auxiliaries, adverbs, verbs, nouns, existentials, prepositions, a particle, an adjective, numerals, temporal noun construction, and verbal repetition.

In this section, I will describe six aspectual functions: quantitative (repetitive, iterative/frequentative, and habitual), imperfective, ingressive, egressive, perfect, and perfective.

⁶ The temporal nouns *lomoi* ‘former’, *malom* ‘not long ago’ (see 2.1), *hawun* ‘tomorrow’ and *pongo* ‘late, later, last’ (see 2.2) cannot be attached to by *=tuh*.

Table 3 summarizes the functions, forms or constructions and parts-of-speech distinction of aspect indicators.

function	form/construction	part of speech
Quantitative Repetitive Iterative/ Frequentative Habitual	<i>hino</i> ‘again’ <i>hoto</i> -(numeral) ‘... times’ <i>bojoin</i> ‘many times’ (verbal repetition) <i>miar/nyinong/sinong</i> +(temporal noun) <i>baas</i> ‘strong’	adverb numeral adverb (action verb) (temporal noun construction) adjective
Imperfective	(verbal repetition) <i>honong</i> ‘be ...ing’ <i>beteng</i> ‘midst’	(stative verb) auxiliary temporal noun
Ingressive	<i>napara</i> ‘begin’	verb
Egressive	<i>tondo</i> ‘stop’	verb
Perfect Resultative ‘Non-resultative’ Experiential	<i>jadi</i> ‘become, then, already’ <i>tohko</i> ‘exist’ (<i>n</i>) <i>yaro</i> ‘not exist’ <i>puji</i> ‘have ...ed’	verb verb (existential) verb (nonexistential) auxiliary
Perfective ‘Non-perfective’	<i>ndai</i> ‘entirely’ <i>salenga</i> ‘suddenly’ <i>umbot</i> ‘finish’ <i>jaha(m)</i> ‘not yet’	particle adverb verb auxiliary

Table. 1 Aspect indicators in Kadorih

3.1 Quantitative

In this paper, the term ‘repetitive’ is used when the same situation occurs *again* on a *different occasion*, ‘iterative’ when an action is repeated on *one occasion*, ‘frequentative’ when the same situation occurs *several times* on *different occasions*, and ‘habitual’ when the same situation recurs *habitually* on *different occasions*.

3.1.1 Repetitive

The adverb *hino* ‘again’ specifies the relevant event to happen for the second time or more as in (24).⁷

- (24) a. *kalawu-i noo-i hino aang taruk kacu.*
then-3sg set.up-3 **again** at/in/on upper wood
‘Then he set it (=fish trap) up **again** on a tree.’
- b. *lombut hino anak palanduk.*
come **again** child chevrotain
‘The kid chevrotain appeared again.’

⁷ The adverb *hino* means ‘more’ when used with adjectives or conjunctive: *segah hino* [strong again] ‘more strong’, *tutang hino* [and again] ‘and further’.

3.1.2 Iterative/Frequentative

The frequency of an event can be easily identified by elements of number-of-times. The information of ‘how often, how many times’ can be clarified by a form of numerals.⁸

- (25) *hoto-uju tonyop, hoto-uju lapang*
times-seven sink **times-seven** float
 ‘seven times sinking, seven times floating’

It is possible for a situation to recur on *one occasion* (iterative), or occur several times on *different occasions* (frequentative). Example (26) shows the adverb *bojoin* ‘much, many times’ specifying the high frequency of the action denoted by each verb. In (26a), the punctual action of *nohtok* ‘cut off’ is repeated on one occasion and it recurs for a short time (for ... minutes or hours). In (26b), on the other hand, the daily action of *tulak bagawi* ‘go to work’ occurs several times on different occasions and it recurs for a long time (for ... months or years).

- (26) a. *ahku bojoin nohtok=ah jatuh nyamah aro*
 1sg **many.times** cut.off=3 that(not.the.other) until much
tohtok=ku.
 cut=1sg.POSS
 ‘I cut them (=the branches of the tree) **many times** until a lot of them were cut.’
 b. *ahku bojoin tulak bagawi bongo-k=ih.*
 1sg **many.times** go work by.oneself-1sg.POSS=just
 ‘I **often** go to work just by myself.’

Repetition of an action verb can denote a frequentative action. Example (27) shows the verb *nangui* ‘swim’ repeated in order to indicate a recurrent activity. See also example (31) for an imperfective reading of verbal repetition.

- (27) *amun ihkai tulak bagawi kuh=pohoi ahi,*
 TOP 1pl.EXCL depart work toward=shorethere
ihkai nangui nangui=ih.
 1pl.EXCL **swim swim**=just
 ‘When going to work on the other side over the river, we just **make it a practice to swim** (to cross the river).’

Notice that *nangui nangui* ‘swim swim’ is a repeated verbal phrase, not a reduplicated word (cf. *nangu-nangui* ‘pretend to swim’).⁹

The quantified phrases *miar* + temporal noun ‘every ...’, *nyinong/sinong* + temporal noun ‘each, every ...’, and the repetitive temporal noun phrase *ngandaii ngandaii* ‘everyday’ can also indicate frequentativity. In (28), *nyinong ondou* ‘every day’ specifies the action or process denoted by *ngalai tuhtui auh* ‘study grammar’ as a daily event.

- (28) *nyinong ondou ahku ngalai tuhtui auh.*
 every day 1sg study voice voice
 ‘I studied grammar **every day**.’

8 *sino* ‘once’, *handuo* ‘twice’, *hatolu* ‘three times’, *hatohtpat* ‘four times’, *hata-limo* ‘five times’, *hata-jahawen* ‘six times’, *hata-uju* ‘seven times’, *hata-hanya* ‘eight times’, *hata-(jala)tien* ‘nine times’, *hata-pulu* ‘ten times’.

9 For the distinctions between repetition and reduplication, see Gil (2005) and Inagaki (2011).

3.1.3 Habitual

‘Habitual’ is usually classified as a kind of imperfective aspect (cf. Comrie 1976: 25, Bybee 1985: 143). I assume that ‘habitual’ in Kadorih is semantically a kind of quantitative aspect since it involves a regular and customary situation holding over a period including past, present and possibly future.

The adjective *baas* ‘strong’ can denote habituality of an action. In (29a), *baas* modifies the verb *kuman* ‘eat’, occurring in the auxiliary position, and specifies that the action denoted by the verb is customary. Accordingly, the whole clause refers to a state of being accustomed. Moreover, in (29b), *baas* constitutes a phrase which means ‘habitually’ with the relativizer.

- (29) a. *ihko baas kuman roti?*
 2sg strong eat bread
 ‘Are you **accustomed to** eat bread?’
- b. *jo=baas, touulun nguan=ah.*
 REL=strong can human do=3
 ‘**Habitually**, people can do it (=seal up a crack).’

In the next example, the construction [*baas* + verbal repetition] is used to indicate a habitual recurrent event. However, both habitual *baas* and frequentative repetition denote the recurrence of an event, therefore (30) doubly marks the frequentativity.

- (30) *uhcang baas ngulam ngulam dinding dahpur=kai,*
 deer strong chew chew wall kitchen=1pl.EXCL
 ‘A deer **always gnaws** the wall of our kitchen.’

3.2 Imperfective

Repetition of a stative verb can denote imperfectivity of the state. Example (31) shows the verb *mihkoh* ‘be afraid’ being repeated in order to indicate durative aspect. See example (27) for a frequentative reading of verbal repetition.

- (31) a. *io=rih mihkoh mihkoh kolou=ah mohcon umba ahku.*
 he=that be.afraid afraid state=3sg.POSS stay with me
 ‘He is **cautiously** spending time with me.’

In addition, the adverbial phrase *hondou homalom* ‘all day and night’ can also indicate a durative situation, as (32) shows.

- (32) *io ngarot=ah, ngalanyang ngalaheng, hondou homalom poros.*
 he feel=3 be.worried/nervous all.day.and.night ill
 ‘He felt worried/nervous, and painful **all day and night**.’

Another imperfective aspect indicator is the auxiliary *honong*. This auxiliary tends to be used with stative predicates, such as a verb *rimbit* ‘foster’ in (33a), an existential *anai* ‘be’ in (33b) or even a clause of ‘(being) six-years old’ in (33c).

- (33) a. *inai Yoga honong rimbit biou.*
 mother(name) IPFV foster infant
 ‘Yoga’s mother is bringing up a baby.’
- b. *(amai Lawang) ijo beteng=tuh honong anai behtang, ...*
 (Lawang’s father) REL midst=this IPFV be long.house
 ‘(Lawang’s father) whose long house is there now, ...’

- c. *katihka ahku honong umur=ku onom toun, ...*
 time 1sg IPFV age=1sg.POSS six year
 ‘When I was six years old, ...’

The temporal noun *beteng* ‘midst’ (described in 2.3 as an element of a present tense indicator) can indicate progressive situation. Unlike the imperfective *honong*, the other imperfective *beteng* tends to be used with active predicates, such as a verb *bagawi* ‘work’ in (34). Frequently, *beteng* functions as subordinating conjunction as seen in (4c) above.

- (34) *puun sohit nanai [...], ahku beteng=ku bagawi,*
 base evening a.moment.ago 1sg midst=1sg work
 ‘At the beginning of this evening, I **was working**.’

3.3 Ingressive

There is an ingressive indicator *napara* ‘begin’ which denotes a situation from the initial phase to transition phase. The prepositional phrase constituted by *tahkan* ‘from’ is often used with *napara* in order to specify a starting point, as (35b) shows.

- (35) a. *nanyam pokomo=ku napara barigas tohko nanyam uhat*
 feeling feeling=1sg.POSS **begin** be.healthy exist feeling tendon
tulang=ku.
 bone=1sg.POSS
 ‘I began to feel better, feel my body.’
- b. *rimai=lah, napara takhan ondou atuh io napa=ah.*
 in.sum=EMPH **begin from** day that he make=3
 ‘In sum, **from** that day, he **began** to make it (=carved wooden figure)’

The first clause in (35a) includes two events denoted by *napara* and *barigas* ‘be healthy’. And it is entailed that the situation of ‘my_feeling_be_healthy’ did not hold (=the initial phase), and that the situation subsequently came to hold (=the transition phase). On the other hand, in (35b), it is entailed that ‘he_make_it’ did not hold and that it subsequently came to hold by the event of ‘he_begin’.

Logically, *napara* requires the initial phase of a situation to be the presupposition. Therefore, each initial phase in (35), ‘my_feeling_be_not-yet_healthy’ and ‘he_not-yet_make_it’ are the presuppositions of each sentence.

3.4 Egressive

The verb *tondo* ‘stop’ denotes a situation from the final phase to the terminal point. It indicates egressive aspect.

- (36) a. *ahku turus tondo nguan gawi-k=ku.*
 1sg then **stop** do work-1sg.POSS=1sg.POSS
 ‘I then **stopped** my working.’
- b. *ahku tondo sokula.*
 1sg **stop** school
 ‘I **quit** school.’

The clause in (36a) is constituted by two events denoted by *tondo* and *nguan gawikku* ‘do my work’. And it is entailed that the situation of ‘I_do_working’ was already established (=the final phase), and that the situation has subsequently led to the terminal point which had been set earlier than expected. Similarly, (36b) includes two events denoted by *tondo*

and *sokula* ‘(attend) school’. For the clause in (36b), it is entailed that the situation of ‘I_attend_school’ in the final phase has led to the advanced terminal point.

Logically, *tondo* requires the final phase of a situation to be the presupposition. Therefore, the establishments of ‘I_do_working’ in (36a) and ‘I_attend_school’ in (36b) are the presuppositions of each sentence.

3.5 Perfect

The term ‘perfect’ refers to “a past situation which has present relevance” (Comrie 1976: 12). There are two kinds of perfect indicators in Kadorih, resultative perfect and experiential perfect. The former entails the direct result of an event but the latter does not so.

3.5.1 Resultative perfect

The verb *jadi* ‘become, then, already’ can be used in three different functions in different environments. Its functions and distribution are summarised in (37).

- (37) The functions of *jadi* ‘become, then, already’
- Verb: indicates (non-causative) change of state if it occurs with a noun or an adjective (property concept word)
 - Conjunction: means ‘then’ if it occurs sentence-initially, followed by a pause
 - Auxiliary: indicates resultative perfect if it occurs before a predicate

(38a) shows the verbal use of *jadi*, and (38b, c) show the auxiliary uses (see also (9a)). For a conjunction use, see the sentence-initial *jadi* in (9b) and (10) above.

- (38) a. *alut=rih jadi segah ndoi ta-pasang gading=ah.*
 boat=that **become** sturdy if SPON-put.on beam=its
 ‘The boat will **become** sturdy if its beam is put on it.’
- b. *kalimoi ijo jadi ta-marekam=ah.*
 legend REL **PFCT** SPON-record=3sg
 ‘a (transcribed) legend which **was recorded** by him.’
- c. *tahpi, jadi ihkai ngorong=ah.*
 but **PFCT** 1sg.EXCL straighten=3
 ‘However, we **had already repaired** it (=telephone).’

The clause (*kalimoi*) *jadi tamarekam* ‘(legend) was recorded’ in (38b) ensures that the direct result of the event holds at the given reference time. It entails ‘legend_be_recorded’ holding for some time after the completion of the event. Similarly, in (38c), it is entailed that the state ‘telephone_be_repaired’ holds for some time after the completion of the event.

In the case of *jadi*, a past situation has relevance to the resultant *state* (at the given reference time). For another resultative perfect indicator *tohko* ‘exist’ (existential), there is a different kind of relevance.

- (39) a. *ahku tohko nyombang=ih, duo kungan kolop.*
 1sg **exist** find=just, two CLASS tortoise
 ‘I just found two tortoises (to eat).’
- b. *ahku tohko moli ohcin ihco kungan.*
 1sg **exist** buy fish one CLASS
 ‘I bought a fish (to eat).’

(39a) shows a finding event acted by ‘I’. In the text, after the event of ‘I_find_two_tortoises’, ‘I’ would eat those two tortoises. In this example, the past situation of ‘I_found_two_tortoises’ has relevance to the resultant *existence* of tortoises. In fact, the tortoises must exist for subsequent cooking and eating. Thus the *tohko* construction in (39a) entails ‘there_be_two_tortoises’ holding for some time after the finding event (until the eating event). Also in (39b), it is entailed that ‘there_be_a_fish’ holds for some time after the completion of the buying event (until the eating event).¹⁰

In addition, *(n)yaro* ‘not exist’ can indicate the negative resultative perfect.

- (40) a. *yaro*=ku *ngonih*=ndai *auh* *asu* *mangang*.
 not.exist=1sg hear=PFV voice dog bark
 ‘I didn’t completely hear the dog bark.’
- b. *Penahtang Nuhpi* *turus* *tiruh*,
 (name) continuously sleep
 kuju ngolomi kaju ondou yaro monyun.
 seven night seven day not.exist get.up
 ‘Penahtang Nuhpi continued to sleep, for seven nights and seven days he didn’t get up.’

The clause with *(n)yaro* in (40a) entails that the state of ‘I_hear_dog_bark’ did *not* hold any more. In (40b), it is entailed that ‘he_get_up’ did *not* hold for seven days after he began to sleep.

Another resultative perfect indicator is the undergoer voice infix *-Vn-* (Inagaki 2013: 60).

(41) shows that the undergoer voice construction *amun tanowong* ‘if it has been felled’ is paraphrased as *umbot towong=ah* ‘after having finished felling’.

- (41) a. *jadi, amun t<an>owong, umbot towong=ah*,
 then TOP <UV>fell finish fell=its
 ‘Then, if it (=tree) has been felled, (I mean) after having finished felling,’
- b. *jadi* [PFCT]: *amun jadi towong* ‘after felling has been done’
 -Vn- [(undergoer.voice)]: *amun t<an>owong* ‘if it has been felled’

It should be noted that the phrase *umbot towong(=ah)* in (41a) can be paraphrased as *amun jadi towong* ‘after felling has been done’ in (41b). See also the description of *umbot* in 3.6 below for the paraphrasability of *umbot* as *amun jadi*. Thus *t<an>owong* can be paraphrased as *jadi towong* in which the verb *jadi* indicates perfect aspect. However, notice that the voice infix *-Vn-* does not necessarily indicate perfect aspect.¹¹

3.5.2 Experiential perfect

The auxiliary *puji* invariably indicates an experiential perfect of a situation. There is a clear distinction between resultative and experiential perfect in Kadorih, as exemplified by *jadi nokuh* [PFCT toward] ‘have gone to’, *puji nokuh* [EXP toward] ‘have been to’. In non-elicited texts, *puji* is usually used with negative elements such as *ya*, *eam*, *(n)yaro*.

¹⁰ The form *tegee* ‘there be’ (borrowed from Ngaju) is not used for indicating continuative perfect.

¹¹ The undergoer voice infix *-Vn-* in Kadorih is the reflex of the PAn perfect marker **ni-/*<in>*. See Adelaar (2013) for the development of the marker in some West Indonesian languages/language groups.

- (42) a. *ya=puji ku=tiruh mahcam orih.*
 NEG=EXP 1sg=sleep like that
 ‘I have never slept like that (=sitting on a tree in a jungle).’
 b. *eam puji ulun noon buwu aang taruk kacu.*
 NEG EXP human set.up fish.trap at/in/on upper wood
 ‘People have never set up a fish trap on a tree.’

The examples in (42) state that the situations denoted by each clause have never happened in each speaker’s lifetime, at least.

Example (43) shows a similar situation without the negative element. There is no entailed resultant state holding for some time after the event of ‘stay_in_mountain’.

- (43) *ulun ijo puji mohcon aang puruk*
 human REL EXP stay at/in/on mountain
 ‘The man who **has an experience** of staying in the mountains.’

The experiencer can be not only animate as ‘I’, ‘people’ or ‘man’ in (42)–(43), but also inanimate as *ondou* ‘day’ in (44).

- (44) *katahin=tuh ondou nyaro puji uhcan.*
 during=this day not.exist EXP rain
 ‘Recently, it has never rained.’

3.6 Perfective

Perfective aspect necessarily takes the parts of a situation, the transition + final phase and the terminal point.¹² One of the perfective aspect indicators in Kadorih is the particle *ndai* ‘entirely, no longer’. If it occurs with a stative predicate such as ‘be intelligent’ or ‘be stupid’, then the meanings of ‘become’ and ‘completely’ will be added to the semantics of a situation. This is the case in example (45a). On the other hand, if it occurs with an action or process predicate such as ‘eat’, it will add ‘completely’ to the predicate, as (45b) shows.

- (45) a. *sapiling saketap bahtu kuong Uhko anan, harati=ndai*
 lost thrown.out stone stupidity (name) there intelligent=**entirely**
Uhko anan=dih. tuh, eam=ndai io uong.
 (name) there=that this NEG=**entirely** 3sg stupid
 ‘Uhko’s stupidity was lost, Uhko **became** smart. Then, he was **no longer** stupid.’
 b. *ahku kuman bari=ndai.*
 1sg eat cooked.rice=**entirely**
 ‘I ate the cooked rice **completely**.’

The perfective indicator *ndai* frequently occurs with *perfect* indicators and liminal predicates as exemplified in a sentence such as *Sapanus=tuh jadi nihou(=ndai)* [(name) =this PFCT pass.away(=**entirely**)] ‘Sapanus has (already) been dead’.

¹² ‘The perfective does indeed denote a *complete* situation, with beginning, middle, and end. The use of ‘*completed*’, however, puts too much emphasis on the termination of the situation, whereas the use of the perfective puts no more emphasis, necessarily, on the end of a situation than on any other part of the situation, rather all parts of the situation are presented as a single whole.’ (Comrie 1976: 18, emphasis added)

There is a negative perfective indicator, the auxiliary *jaha(m)* ‘not yet’. It indicates that the relevant situation is insufficient and not completed. This ‘non-perfective’ situation is distinct from imperfective one in that the former denotes a liminal situation while the latter denotes an aliminal one as described in 3.2 above. The clause in (46) means that the action ‘ask many questions’ is insufficient and not completed at the given reference time.

- (46) *ahku jaha ngisok aro umba dolang injah=ku.*
 1sg **not.yet** ask much with PL mate=1sg.POSS
 ‘I **have yet to** ask my mates about many things.’

Another perfective aspect indicator, the adverb *salenga* ‘suddenly’ involves a special operation which changes two successive phases into a single punctual situation. That is, the transition and final phases are compressed into one complex phase. Thus, *salenga* denotes a situation from the punctual transition-final phase to the terminal point. This punctual conversion can be observed well with action or process predicates as in (47).

- (47) a. *saran umo-m=rɪh, salenga ta-konɪh=ku.*
 edge rice.field-your=that **suddenly** SPON-hear=1sg
 ‘At the edge of your rice field, **suddenly** I just heard (the voice).’
 b. *ahku salenga nohto oko=ku tutang ulun bohkon.*
 1sg **suddenly** see old=1sg.POSS and human different
 ‘I **suddenly** just saw my parent and another guy.’

Another perfective indicator is the verb *umbot* ‘finish’. The resultative perfect indicator *jadi* introduced in §3.5.1 can often be replaced by the perfective indicator *umbot* as in (48).

- (48) *Miskin jadi kuman. rimai=lah, umbot kuman.*
 (name) PFCT eat in.sum=EMPH finish eat
 ‘Miskin already ate (them). In sum, he completely ate (them),’

This fact suggests that there is a certain similarity between these two indicators. As a matter of fact, the perfective *umbot* functions as a conjunction ‘after having finished’ when it links clauses as in (49).

- (49) a. *anan umbot mondui=rɪh, muluh nguan ukun,*
 there **finish** take.a.bath=that cook.rice make food
umbot muluh nguan ukun, “yo nang” hion Sangumang.
finish cook.rice make food OK mother QUOT (name)
 ‘**After having finished** taking a bath there, (they) cooked rice and made meals, and **after** (they) **had finished** cooking rice and making meals, Sangumang said “OK, mother”.’
 b. *aang anan umbot ulun munu urak manuk, tongai muluh*
 at/in/on there **finish** human kill pig fowl portion cook.rice
nguan ukun, umbot muluh nguan ukun, ulun basarungan
 make food **finish** cook.rice make food human serve.food
umbot kuman bolum, lang=jo mahcu tiruh, ...
finish eat live PL=REL far sleep
 ‘**After** people **had finished** killing pig and fowl, some of them cooked rice and made meals, and **after having finished** cooking rice and making meals, the people served the meals. **After having finished** the meal, those who came from far (stayed there and) slept, ...’

In texts, when giving an instruction or explanation for a process of making (e.g. making a boat), both phrases *umbot orih* [finish that] ‘after (having finished) that’ and (*amun*) *jadi orih* [TOP perfect that] ‘after that, after having been done’ are frequently used for moving on to the next process, and these two phrases have little difference in meaning. See §3.5.1 for the description of undergoer voice infix as a minor indicator of resultative perfect.

The perfect aspect indicator *jadi* can also function as a conjunction as noted in (37b). And this kind of perfect(ive) conjunction is used for introducing a situation relative to the established situation of the previous clause. The perfect indicator *jadi* and the perfective indicator *umbot* share that function.

4. Modality indicators

In this section, I will describe five modal functions occurring in Kadorih: ‘wanting’, ‘necessity/obligation’, ‘ability’, ‘possibility’, and ‘permission’. They can be indicated mainly by auxiliaries, verbs, nouns, adverbs, etc., and cannot be indicated by morphological means. Table 4 summarizes the functions, forms and parts-of-speech distinction of Modality indicators.

function	form/construction	part of speech
Wanting agent-oriented	<i>huang</i> ‘inside’ (+future) <i>jolik</i> ‘desire’ <i>kani</i> ‘want’ <i>elen</i> ‘not want’	noun verb verb auxiliary
event-oriented	<i>batek</i> ‘desirable’	adjective
Necessity/Obligation event-oriented	(command intonation) (<i>ma</i>) <i>himat</i> ‘require’	verb
agent-oriented	(<i>harus</i> ‘must’) <i>padulu</i> ‘pursue’ <i>puna</i> ‘indeed’ (+certainty)	(auxiliary) verb adverb
Ability	<i>tou</i> ‘can’ <i>duon</i> (+ person/number) ‘get’	auxiliary verb
Inability	<i>eam/ya</i> + <i>taan</i> ‘not know’	(verbal construction)
Possibility	<i>badaii</i> ‘probable’ <i>tou</i> ‘may, will’ <i>duon</i> ‘get’	verb auxiliary verb
Impossibility	<i>eam/ya</i> + <i>taan</i> ‘not know’	(verbal construction)
Permission	<i>tou</i> ‘can, may’	auxiliary

Table 4. Modality indicators in Kadorih

4.1 Wanting

The spatial noun *huang* ‘inside (=intend to)’ can convey the meaning of wanting because it can designate ‘inside the heart’ as illustrated by *hion huang=ah* [QUOT inside=3sg.POSS] ‘said in 3sg.POSS heart’ in (8) above.

- (50) a. *ahku=tuh huang ngesah tahkan tapara-i.*
1sg=this inside tell.story from origin-its
‘Now, I **would like to** tell the story from the start.’

- b. *io* **huang** *buli tanggal duo pulu.*
 3sg **inside** return date two ten
 ‘He **is going to** go home on the 20th.’
- c. *ondou jadi bohta-bohtat, **huang** boloang.*
 day become dawning **inside** clear
 ‘It became dawn, (the sky) **is going to** become clear.’

In (50a), *huang* indicates agent-oriented wanting, and the sentence shows that there are agent-internal conditions of wanting to conduct the action denoted by the predicate. If the agent is inanimate 3rd person as in (50c), then *huang* indicates the future tense (or prospective aspect). However, when used with the animate 3rd person agent as in (50b), *huang* usually carries the meaning of future tense, but it can also indicate agent-oriented wanting (‘He wants to go home on the 20th’). Of course, *huang* in the clause with 1st person agent may indicate the future tense depending on the context. In fact, *huang* in (50a) can be paraphrased as the general future indicator *ahkan* (compare (50a) with (17b) above). Thus *huang* can be described as a wanting/future indicator.

Other wanting indicators include the verb *jolik* ‘desire’, the auxiliaries *kani* ‘want’ and *elen* ‘not want’. These indicators always express agent-oriented wanting as in (51), and cannot carry tense information (cf. *huang* above).

- (51) a. ‘*inai amai doro pasti **jolik** nohto osun=do.*’
 mother father in.a.twosome surely **desire** see grandchild=3pl.POSS
 ‘“I think (your) parents **hope to** see their grandchildren”.’
- b. *io ya=**kani** tahi lanon.*
 3sg NEG=**want** (time)long be.awake
 ‘He doesn’t **want to** stay up all night.’
- c. ‘*ele-u naing ah=rih. amai, nyaro=ah **kani** jihpon.*’
 not.want-3sg word 3sg.POSS=that father not.exist=3sg **want** servant
 ‘“He said he **didn’t want**. (My) father! he never **wanted** any servant”.’

These auxiliary(-like) indicators above express agent-oriented wanting. On the other hand, *batek* ‘desirable’ in (52) indicates event-oriented wanting, and can evaluate events in terms of what is desirable under agent-external conditions. Example (52) says that ‘my nephew deceived me’ is undesirable under social conditions.

- (52) ‘*eam **batek** hio-i.*’
 NEG **desirable** QUOT-3sg.POSS
 ‘“It (=the fact that my nephew deceived me) is not good” he said.’

4.2 Necessity/Obligation

In Kadorih, the command intonation is constituted by suprasegmental features, mainly distinctive loudness (=larger) over the whole sentence to contrast with a simple statement of fact, and sentence-final non-rising pitch. It can be used to express necessity or event-oriented obligation.¹³ In (53), for example, the meaning of necessity is conveyed by the command intonation over the sentence. Thus the generic statement of ‘people_set_up_fishtrap_in_the_river’ in (53) represents general rule of conduct.

¹³ Obligations of this kind ‘do not rest upon a particular participant, but represent general rules of conduct’ (Hengeveld 2004: 1195).

- (53) *'(ulun noon buwu) aang danum! aang sungoi!'*
 human set.up fish.trap at/in/on water at/in/on river
 '((It is necessary for) people to set up a fish trap) in the water! in the river!'

The auxiliary (*ma*)*himat* 'require' can also indicate necessity as in (54).

- (54) a. *mahimat dahtar tohtok ah=rih.*
 require plain cut its=that
 'It is necessary for its piece (of wood) to be plain.'
 b. *himat tahkan urung anai=rih.*
 require from nose there=that
 'It is necessary for the process to be started from the stem (of the boat).'

On the other hand, the meaning of agent-oriented obligation is conveyed by *harus* 'must' (borrowed from Malay), *padulu* 'pursue' or *puna* 'indeed'. Example (55a) is a non-elicited example of *harus*, while (55b) and (55c) are elicited/translated examples (from Indonesian) of *padulu* and *puna*.

- (55) a. *ondou hawun ahku harus nokuh umo.*
 day tomorrow 1sg must toward rice.field
 'I must go to the rice field tomorrow.'
 b. *ihko padulu nuhtui.*
 you pursue give.a.speech
 'You need to describe something (in terms of its price).'
 c. *tahpi ihto puna ngindoi=ah.*
 but 1PL.INCL indeed wait=3
 'However, we must wait for it.'

The adverb *puna* 'indeed' in (55c) can also function as a certainty (or epistemic necessity) indicator. In (56a), *puna* expresses deductive certainty based mainly on speakers's experience, while in (56b) it expresses assumptive certainty based mainly on visual evidence.

- (56) a. *ahku jadi jelas, jadi nohto, puna anak Bolihkoi.*
 1sg PFCT sure PFCT see indeed child (place.name)
 'I was sure, I saw it, it was (certainly) the tributary of Marikoi River.'
 b. *ulun atuh puna bokoporos=ah, kihta-k=ku.*
 human that indeed be.painful=3sg vision-1sg.POSS=1sg.POSS
 'That person was really suffering pain, I saw him.'

4.3 Ability

There are three kinds of ability indicators, the auxiliary *tou* 'can, may, possible', the verb *duon* 'get, can', and the negated verb *eam taan* or *yataan* 'not know'.

4.3.1 Ability: *tou*

The auxiliary *tou* carries the meaning of 'ability of the agent' when used with an animate agent argument as in (57). It can also express possibility (4.4.2) or permission (4.5). In both (57a) and (57b), the enabling conditions for the action 'swim' and 'answer' are basically internal to the agents (agent-oriented), but in other contexts, they may be external to the agents.

- (57) a. *'inon ihko tou nangui?' hio-k=ku.*
 what you **can** swim QUOT-1sg.POSS=1sg.POSS
 '“**Can** you swim?” I asked.’ (on a boat)
- b. *ahku eam tou mutah=ah.*
 1sg NEG **can** answer=3
 ‘I **didn’t** know the answer.’ (lit. I could not answer it.)

4.3.2 Ability: *duon*

Second ability indicator is the verb *duon* ‘get’. It can function as an auxiliary indicating the ability of the agent as in (58). The person/number is cross-referenced on *duon* (-k=ku [-1sg=1sg]) if agent-oriented ability is indicated. Here, the enabling conditions for the action ‘defeat’ are in the agent *ahku* ‘I’. The ability marker *duon* cannot be used to express permission (cf. *tou*), but see 4.4.3 for its possibility reading.

- (58) *'ahku duo-k=ku po-kalah io.'*
 1sg **get**-1sg=1sg CAUS-lose 3sg
 ‘“I **can** defeat him”.’

4.3.3 Ability: *taan*

Third (in)ability indicator is the verb *taan* ‘know’ (e.g. *eam=ku taan ara-m* [NEG=I know name-your] ‘I don’t know your name’). Together with the negative auxiliary *eam* or *ya*, the construction carries the meaning of ‘inability of the agent’, as (59) shows. The (in)ability indicator (negative +) *taan* is not used to express (im)permission (cf. *tou*), but see 4.4.4 for its (im)possibility reading.

- (59) a. *kapahtung jatuh=nai,*
 puppet that(not.the.other)=a.moment.ago
baya puna ya=taa-i nahasong, ...
 only indeed NEG=know-it breathe
 ‘That (not the other) puppet just really **cannot** breathe.’
- b. *'ihko ya=taa-m nuhkat ahka-k bua.*
 you NEG=know-you climb for-me fruit
ombai=poh kan=bawi Sandah malom tou'.
 why=(exclamative) for=female (name) not.long.ago can
 ‘You **cannot** climb (the tree) to get the fruit for me (now). Why on earth could (you do so) for Bawi Sandah yesterday.’

In (59a), the disabling conditions for the action ‘breathe’ are internal to the agent *kapahtung* ‘puppet’. On the other hand, the utterance in (59b) states that the agent *ihko* ‘you (=kid chevrotain)’ could climb a tree ‘yesterday’ but cannot do so ‘today’. The speaker of this sentence believes that the disabling conditions for the action ‘climb’ are completely inside the agent.

4.4 Possibility

4.4.1 Possibility: *badaii*

One of the possibility indicators is the adverb *badaii* ‘probable’. It indicates speculative possibility.

- (60) *badaii=ih ahku jadi kolou ulun ijo oko*
 probable=just 1sg become like human REL old
 ‘It is possible that I have become like an old man.’

4.4.2 Possibility: *tou*

As noted in 4.3, the ability indicator *tou* (also *duon* and *taan*) carries the meaning of possibility when the enabling conditions for the event are external to the agent. The auxiliary *tou* is the most frequent modality indicator because of its high functional load, and it can carry the meaning of speculative epistemic possibility as in (61a) or assumptive epistemic possibility as in (61b).¹⁴ See section 4.3.1 for the ability reading and section 4.5 for the permission reading.

- (61) a. *mihkoh io tou balua sala umba sarupih=rih.*
 be.afraid it **can** go.outside wrong with plank=that
 ‘Being afraid that it (=nail) **may** stick out in a wrong direction from the plank.’
- b. *napurak, (danum) tou tame nokuh luwang alut.*
 wet water **can** go.inside toward inside boat
 ‘Being wet, (water) **will** go inside a boat.’

4.4.3 Possibility: *duon*

The person/number is cross-referenced on *duon* under the internal enabling conditions (see (58) in 4.3.2). However, it is not the case when *duon* indicates ‘root possibility’ (Bybee et al. 1994: 178, 194).¹⁵ ‘Root possibility’ is the ability/possibility allowed by external enabling conditions, and the interpretation can be paraphrased by ‘have the opportunity’. In (62a), *duon* in main clause is not cross-referenced by 1st person singular, and the external (social) enabling condition ‘circumstance_press_on_me’ is denoted by the subordinate clause. In (62b), the subordinate clause denotes one of the external (physical) enabling conditions, which cause a loss of ability or possibility to ‘return in a day’.

- (62) Structure: [ability/possibility] ‘because’ [external conditions]
- a. *ahku ya=duon ngindoi io nyamah io buli,*
 1sg NEG=**get** guard him until 3sg return
kobaiu keadaan mendesak ahku=ka.
because circumstance press me=also
 ‘I **will** not (**be able to**) support him until he goes home, because the circumstances are pressing on me.’
- b. *jadi, ahku murik hawun, ya=duon topuli,*
 then 1sg go.upstream tomorrow NEG=**get** return.in.a.day
kobaiu sungoi Bolihkoi beteng=tuh tocah nganyangit.
because river (place.name) midst=this dry very
 ‘Then, I will go upstream tomorrow, I **will** not (**be able to**) return in a day because the Marikoi river is very shallow now.’

¹⁴ I will follow the distinction of epistemic judgements made by Palmer (2001): (i) speculative (MAY: possible conclusion), (ii) deductive (MUST: only possible conclusion), and (iii) assumptive (WILL: reasonable conclusion).

¹⁵ ‘[I]t is possible for the agent to carry out the action of the main verb; i.e. s/he is able and external conditions allow it’ (Bybee et al. 1994: 320). Hengeveld (2004: 1195) classifies it as ‘facultative event-oriented modality’.

The conclusions that ‘I cannot support him [...]’ and that ‘I will not be able to return [...]’ in (62) are reasonable ones based mainly on the speaker’s experience. Thus, *duon* can also be characterized as an indicator of assumptive root possibility.

4.4.4 Possibility: *taan*

Unlike *duon*, the person/number can be cross-referenced on the other root impossibility indicator negative + *taan*, as (63) shows (cf. (59) in 4.3.3). In (63), 3rd person singular -*i* is marked on *ya=taan* despite the agent-external (physical) disabling conditions, i.e., ‘there_be_water’ which causes a loss of ability or possibility to ‘adhere (to it)’. This fact suggests that the ability/possibility indicator *duon* is distinct from ‘NEG *taan*’ in terms of whether the person/number can be cross-referenced under agent-external conditions.

- (63) *ya=taa-i leket=ndai lisan kabain danum=rih.*
 NEG=know-it cling=entirely epoxy owing.to water=that
 ‘The epoxy resin bond **will** not (**be able to**) adhere (to it) any more because of the water (brought by rain).’

4.5 Permission

As described in 4.3.1 and 4.4.2, the auxiliary *tou* can indicate ability and possibility. It can also carry the meaning of permission when the co-occurring predicate denotes a generic situation as in (64). The permission meanings of *tou* are conveyed under social enabling conditions.

- (64) a. *huang=to ohat dohpo, limo dohpo, uras tou=ih.*
 inside=1pl.INCL four fathom five fathom all **can**=just
 ‘What we have in mind, (we want it to be) four or five fathoms, **it is (socially) possible for** all lengths.’
 b. *tou ihto nokuh himba, ngurah karo sibip.*
can 1pl.INCL toward forest look.for muchness remnant
 ‘**It is (socially) possible for** us to go to the forest and to look for a lot of (wood) uncarried.’

5. Evidentiality indicators

In Kadorih, there are indicators of sensory (=seeing, hearing) and reporting evidence. Table 5 summarizes the functions, forms and parts-of-speech distinction of evidentiality indicators.

function	form/construction	part of speech
Sensory seeing	<i>hom</i> ‘here and now (visible)’ <i>panohto</i> ‘seeing’ <i>kihtan</i> ‘vision’	particle verbal noun noun
hearing	<i>pangonih</i> ‘hearing’	verbal noun
Reporting	<i>hion</i> ‘QUOT’	Quotative

Table 5. Evidentiality indicators in Kadorih

The tense of both the seeing and hearing event are specified as non-future. Thus the sensory evidentiality indicators can be described as evidential/non-future indicators.

The deictic particle *hom* ‘here and now (visible)’ usually expresses visual evidentiality of the situation which holds at the present moment, as (65a) shows. Also, the particle *hom*

can introduce the conclusion of an inference. For the example in (65b), it is the only possible conclusion (=deductive) of ‘your_stupidity_be_most_excessive’. It was inferred from the fact that the speaker saw ‘your’ stupid behavior (=setting the fish trap on a tree (24a)).

- (65) a. *haru-m lombut=hom.*
 newly-you come=**here.now.visible**
 ‘You arrived now (**I am seeing you**).’
- b. ‘*tapa-dalou hom=emu kuong mu=tuh.*
most-excessive here.now.visible=yours stupidity your=this
 ‘(It is necessary that) your (stupidity) is the most excessive, your stupidity.’

Verbal nouns of sensory events such as *panohto* ‘seeing’ or *pangonih* ‘hearing’ can specify the source of evidence. (66a) shows that the evidence was obtained by the speaker’s eye. The conclusion ‘person_be_woman’ was inferred from the evidence (e.g. non-growth of facial hair, non-enlargement of larynx (Adam’s apple), etc.). Similarly, it is also possible that the source of evidence is specified by the sensory noun *kihtan* ‘vision’ as in (66b).

- (66) a. *panohto=ku, io ulun bawi.*
seeing=1sg.POSS 3sg human female
tahpi hio-i umba arop=ah, ‘ulun bahkas’.
 but QUOT-3sg.POSS with self=3sg.POSS human male
 ‘I saw (her), (**it was necessary that**) the person was a woman, but the person said to herself “(I am) a man”.’
- b. *pohkok=ah ara-i=dih ulun bahkas,*
 main.part=its name-3sg.POSS=that human male
tahpi kihta-k=ku ulun bawi.
 but **vision-1sg.POSS=1sg.POSS human female**
 ‘The main thing is that it was a man’s name, but I saw (her), (**it was necessary that**) (the person) was a woman.’

The conclusions can be inferred, by the 3rd person, from the sensory evidence obtained by the 3rd person’s eye as in (67).

- (67) *Uhko nakung buwu=oh. [...] kihta-i ohcin naang aro.*
 (name) carry fish.trap=3sg.POSS **vision-3sg.POSS** bird much
 ‘Uhko carried his fish trap. [...] **He saw that** there were many birds.’

The quotative marker *hion* (originally a noun that means ‘word’) can be used by a speaker to repeat someone’s utterance.¹⁶ It can specify that the source of evidence is the person(s) whose utterance is quoted. Accordingly, someone’s utterance can be regarded as a kind of evidence. Examples (18) in 2.2.2 and (52) in 4.1 above are repeated in (68).

- (68) a. ‘*hawun’ hio-i, ‘Cahaci ahkan ngunyang=ah’.*
 tomorrow QUOT-3sg.POSS (name) FUT check.fish.trap=3
 ‘“Tomorrow” **she (=Manana) said**, “(Ra)cahaci will check the fish trap”.’

¹⁶ I will describe *hion* as the quotative marker because it is originally not the reporting evidential. It can quote the speaker’s utterances, ‘chanting’ for hearer (in order to command to chant), expressions from another language, technical terms, sounds (e.g. rain, onomatopoeia), or even nonverbal gestures.

- b. “*eam batek*” *hio-i*.
 NEG desirable QUOT-3sg.POSS
 ‘“It (=the fact that my nephew deceived me) is not good” he (=Racahaci) said.’
- c. “*ihko eam mahtoi*” *hio-n* *auh=ah*.
 you NEG die quotative-(linker) voice=3sg.POSS
 ‘“You (=Penahtang Nuhpi) won’t die” he (=Utem) said.’

A summary of conclusions inferred from (68) and their utterers is given in (69).

(69) It is possible/necessary that...	the source of evidence
a. ‘tomorrow Racahaci will check the fish trap’	Manana
b. ‘the fact is not desirable’	Racahaci
c. ‘Penahtang Nuhpi won’t die’	Utem

The choice between epistemic ‘possible’ and ‘necessary’ in (69) will be determined pragmatically, on the basis of various social (or possibly physical) conditions.

6. Conclusion

In this paper, I described non-morphological means for indicating tense, aspect, modality and evidentiality (TAME) in Kadorih. TAME meanings are not indicated by, for example, pronouns, cardinal numbers, interjections or classifiers but by several other parts of speech such as adverbs, nouns, auxiliaries or verbs. Adjectives, prepositions, numerals and particles are rarely used as TAME indicators in Kadorih.

In the Kadorih tense system, three kinds of past (remote, near (or distant) and general past) and two kinds of future (near (or distant) and general future) are distinguished. It is interesting that some tense indicators can be used either adverbially or adnominally.

Aspect is indicated mainly by verbs, auxiliaries and adverbs, and also by verbal repetition (not by reduplication). Repetition of an action verb indicates frequentative aspect whereas that of a stative verb indicates imperfective.

Modality is indicated mainly by verbs and auxiliaries. Among modality indicators, *tou* can express ability, possibility and permission. On the other hand, *duon* and *eam/ya + taan* can express (in)ability or (im)possibility, but not permission. One of the characteristic properties of the Kadorih modality system is that grammatical cross-reference on *duon* is sensitive to whether a relevant enabling condition is internal or external to the agent of an event. Person/number is cross-referred if the condition is internal (ability reading), while it is not cross-referred if the condition is external (possibility reading).

Kadorih has sensory and reporting evidentiality indicators but there is no negative indicator in evidentiality system as in non-future tense system. On the other hand, negative indicators can be found in the future tense (*balang* ‘not to happen’), resultative perfect aspect (*(n)yaro* ‘not exist’), perfective aspect (*jaha(m)* ‘not yet’), and wanting modality (*elen* ‘not want’). Given that the tense of a sensory evidential event is specified as non-future, it can be said that the concept of negation in Kadorih is not easily integrated into the concept of non-future tense or evidentiality.

Abbreviations

1	first person	2	second person
3	third person	CAUS	causative
CLASS	classifier	EMPH	emphasis
EXCL	exclusive	EXP	experiential
FUT	future	INCL	inclusive
IPFV	imperfective	PFCT	perfect
PFV	perfective	pl	plural
POSS	possessive	QUOT	quotative
REL	relativizer	sg	singular
SPON	spontaneous	TOP	topic
UV	undergoer voice		

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